



Applying HUD's Floodplain Management and Wetlands Protection Standards

U.S. Department of Housing and Urban Development
Office of Environment and Energy



Executive Order 11988

Floodplain Management Training



Jerimiah Sanders
U.S. Department of Housing and Urban Development Office of
Environment and Energy



Executive Order 11988

Requires Federal Agencies to

- avoid development in the Floodplain
- develop regulations

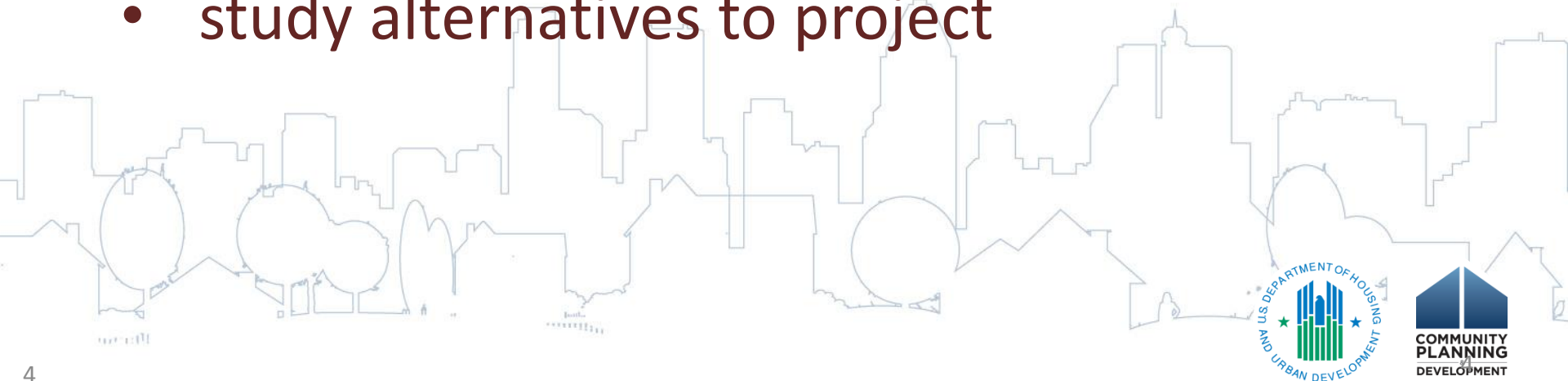
(24 CFR Part 55)



Floodplain Management

Purpose: Federal Agencies should

- avoid development in base (i.e. 100-year or 500-year for critical actions) floodplain
- avoid adverse effect to FP
- study alternatives to project





“Floods are 'acts of God,' but flood losses are largely acts of man.” – Gilbert White

Floodplain Management

24 CFR Part 55

Applies to physical actions in 100yr (or critical actions in 500yr):

- 1-4 family rehab if $> 50\%$ value
- Buildings
- Roads
- Pipelines
- Anything except minor clearing and grubbing

24 CFR Part 55.12

Eight Step Process N/A

- 1-4 family dwelling < 50% change in value
- Minor repairs NOT Rehab (see Q and As)
- Incidental portion in floodplain
- Imminent threats to health/safety
- Minor amendment to approved action
- Down payment assistance to existing
- Areas with LOMA/LOMR
- Mortgage Insurance (Single Family)



Alternatives

A photograph of Mount Everest in the background, with a red tent and several people in the foreground, likely at a base camp.

Alternatives

New Site

Redesign Existing Site

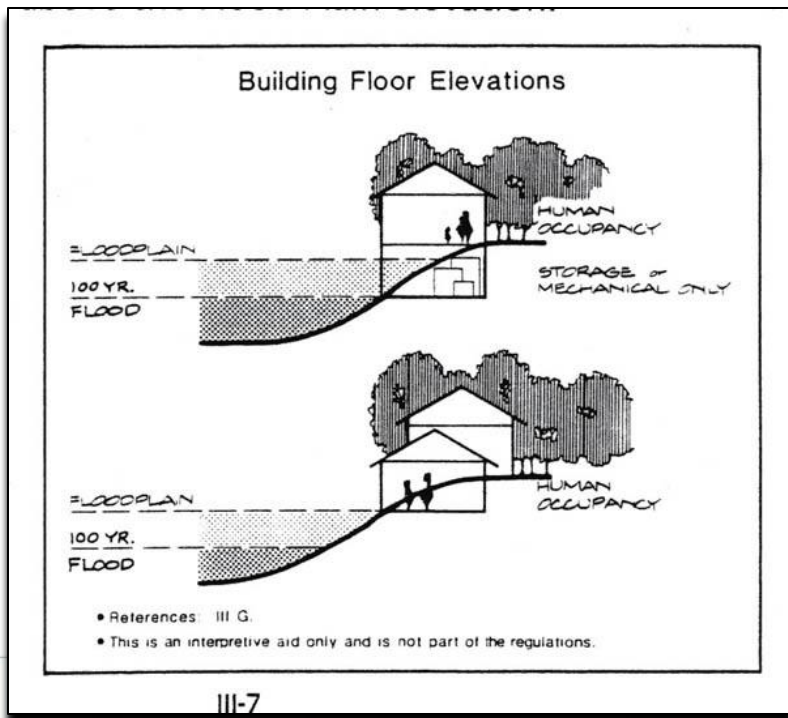


Image from town of Avon, CT

http://www.town.avon.ct.us/Public_Documents/0000FB6A-80000001/section3



Alternatives

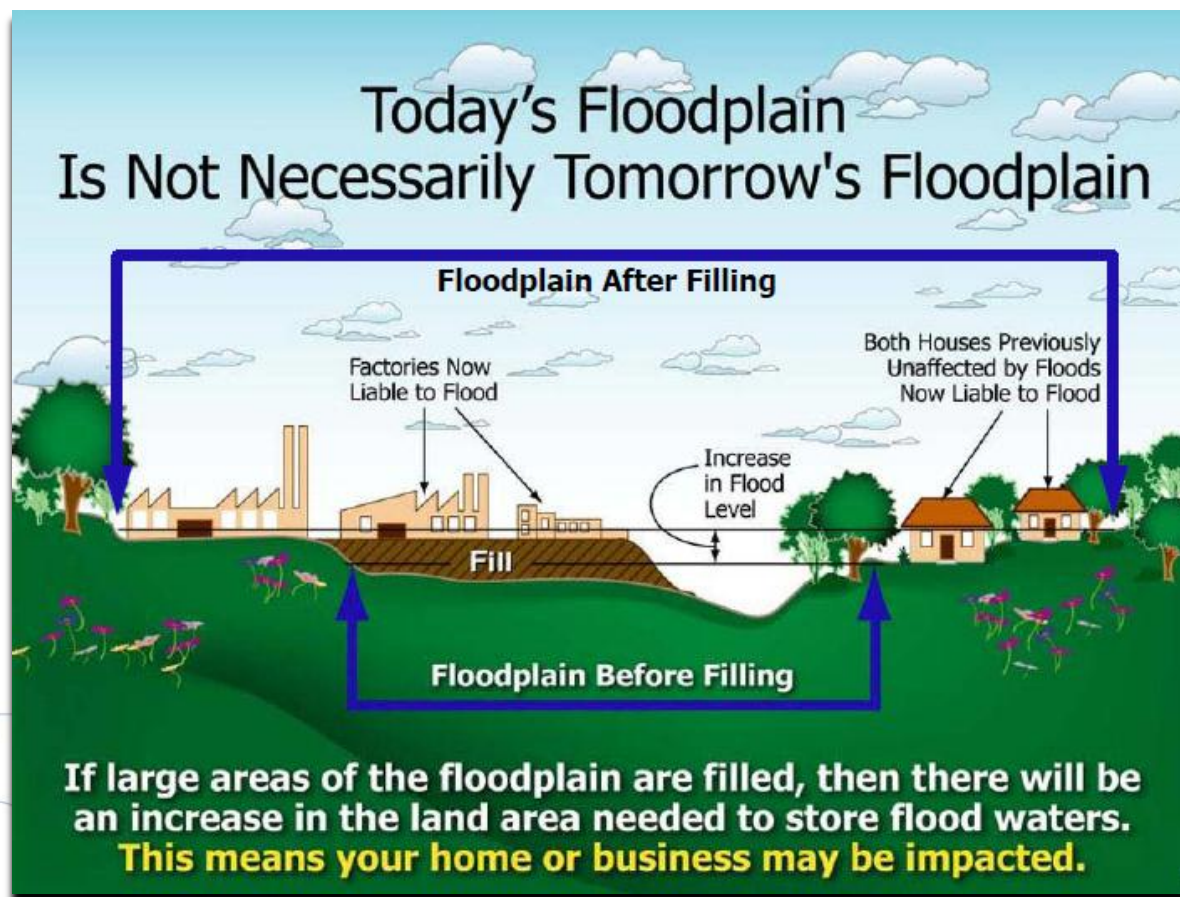
New Site Redesign Existing Site Obtain LOMA or LOMR

U.S. DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY		U.S.A. NO. 344-0017						
COMMUNITY ACKNOWLEDGMENT FORM		Revised December 01, 2009						
PAPERWORK BURDEN DISCLOSURE NOTICE Public reporting burden for this form is estimated to average 1.5 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collection Management, U.S. Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20473, Paperwork Reduction Project (1805-0018). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. Please do not send your completed survey to the above address. This form must be completed for requests involving the existing or proposed placement of FD (complete Section A) or, to provide acknowledgment of this request to remove a property from the IFPA, which was previously located within the regulatory floodway (complete Section B). This form must be completed and signed by the official responsible for floodplain management in the community. The six digit SFP community number and the subject property address must appear in the spaces provided below. Incomplete submissions may result in processing delays. Community Number: _____ Property Name or Address: _____								
A. REQUEST INVOLVING THE PLACEMENT OF FD As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed the letter of request. Based on FD (LOMR/P) or Conditional LOMR/P request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no FD be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been or will be obtained. It is further acknowledged that the land and any existing or proposed structures to be removed from the IFPA are or will be reasonably safe from flooding as defined in 44CFR 60.203, and that we have available upon request by DHS/FEMA all evidence and documentation used to make this determination. For LOMR/P requests, we understand that the request is being forwarded to DHS/FEMA for a possible map revision. For LOMR/P or Conditional LOMR/P requests that have the potential to impact an endangered species, documentation will be submitted to show that we have complied with Sections 8 and 10 of the Endangered Species Act (ESA), Section 6 of the ESA provide approval from "taking" or harming an endangered species. If an action might have an endangered species, a permit is required from U.S. Fish and Wildlife Service or National Marine Fisheries Service under Section 10 of the ESA. For actions authorized, funded, or being carried out by Federal or State agencies, documentation from the agency showing its compliance with Section 7(a)(2) of the ESA will be submitted. Community Comments: <table border="1"><tr><td colspan="2">Community Official's Name and Title (Please Print or Type)</td><td>Telephone No.:</td></tr><tr><td>Community Name:</td><td>Community Official's Signature (required)</td><td>Date:</td></tr></table>			Community Official's Name and Title (Please Print or Type)		Telephone No.:	Community Name:	Community Official's Signature (required)	Date:
Community Official's Name and Title (Please Print or Type)		Telephone No.:						
Community Name:	Community Official's Signature (required)	Date:						
B. PROPERTY LOCATED WITHIN THE REGULATORY FLOODWAY As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed the request for a LOMA. We understand that the request is being forwarded to DHS/FEMA to determine if the property has been inadvertently included in the regulatory floodway. We acknowledge that no FD on the property has been or will be placed within the designated regulatory floodway. We find that the completed or proposed project meets or is designed to meet all of the community floodplain management requirements. Community Comments: <table border="1"><tr><td colspan="2">Community Official's Name and Title (Please Print or Type)</td><td>Telephone No.:</td></tr><tr><td>Community Name:</td><td>Community Official's Signature (required)</td><td>Date:</td></tr></table>			Community Official's Name and Title (Please Print or Type)		Telephone No.:	Community Name:	Community Official's Signature (required)	Date:
Community Official's Name and Title (Please Print or Type)		Telephone No.:						
Community Name:	Community Official's Signature (required)	Date:						

DHS - FEMA Form #1878, DEC 07 Community Acknowledgment Form NT-1 Form 3 Page 1 of 1

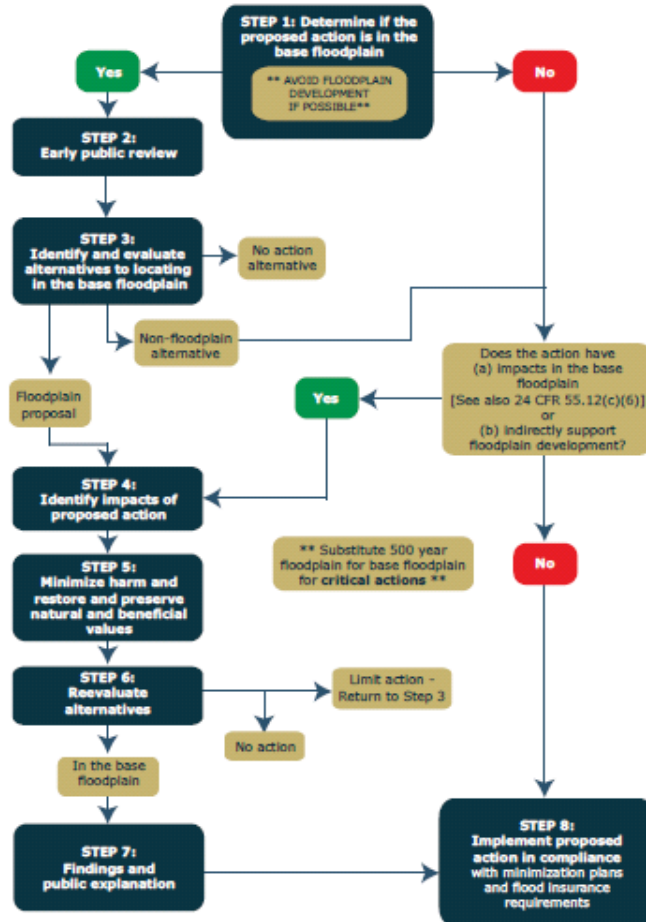


Be Aware of Impacts



Alternatives

8- Step Decision-Making Process for Executive Order 11988



New Site
Redesign Existing Site
Obtain LOMA or LOMR
Conduct 8 step to
study alternatives



Floodplain Management Decision Making Process

Requires :

- Consideration of alternatives
- Public Notice/s (2)
- Mitigate damage

Process called: 8 Step Process

Model 8 Step Process available at:

http://portal.hud.gov/hudportal/documents/hudoc?id=DOC_14214.doc



The 8-Step Process: Step 1

Is the site in the 100 yr Floodplain (or 500-year floodplain for critical actions)?

IF no,

- Photo Copy FIRM Map and panel
- Mark the site
- Use to document the ER
- Proceed with project



Prohibitions on Federal Assistance

Floodways: portion of floodplain which is effective in carrying flow, where the flood hazard is generally greatest, and where water depths and velocities are highest.

- ALL ACTIONS ARE PROHIBITED except for functionally dependent uses

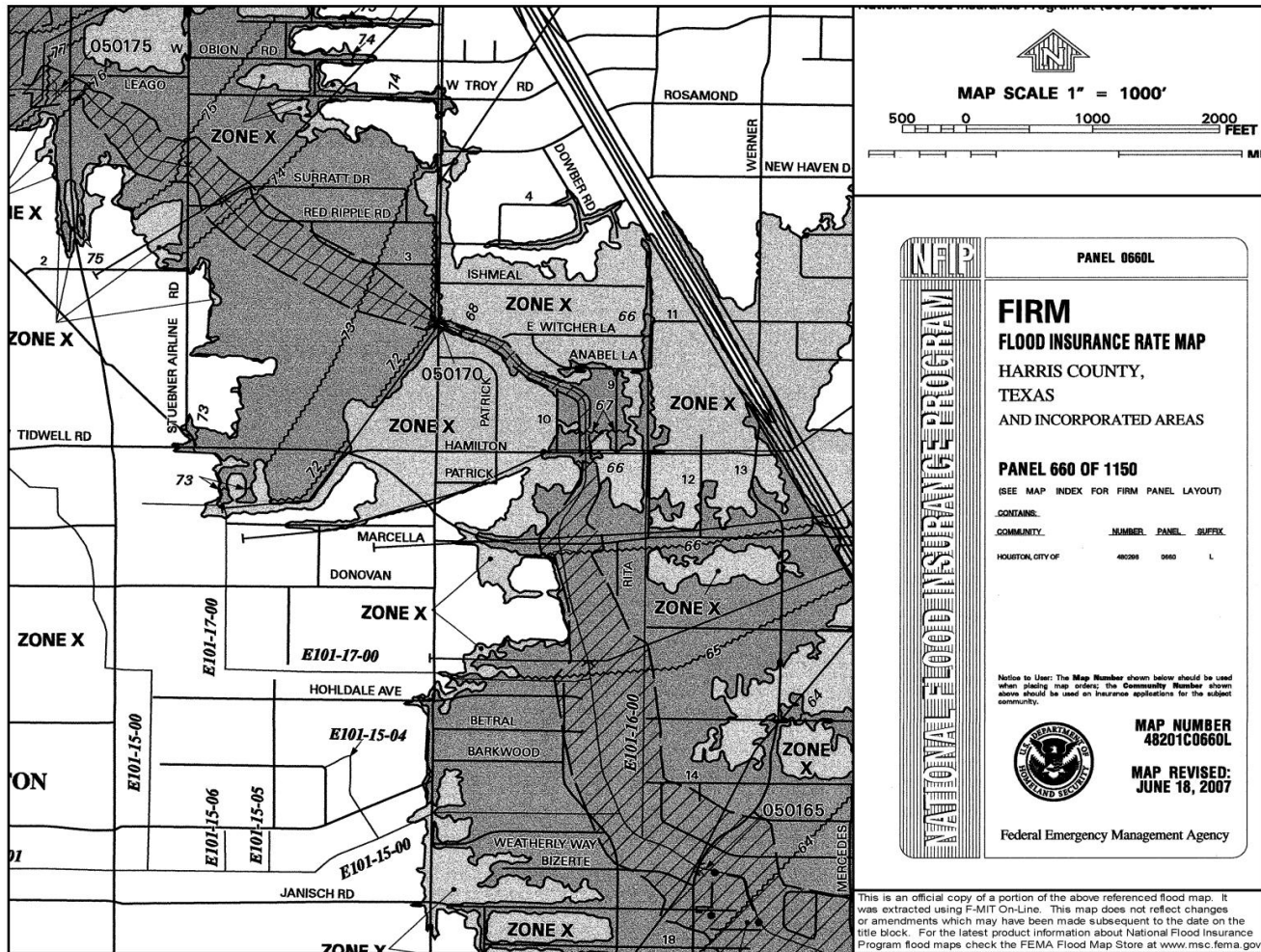
Coastal High Hazard Areas (V Zone): area subject to high velocity waters from hurricanes or tsunamis.

- Critical Actions are prohibited in these areas
- Action must meet NFIP standards or standards applicable at the time of construction

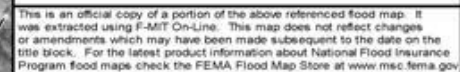
* See 55.1(C) for further information.




Example of a FIRM



If flood insurance is available in this community, contact your local Flood Insurance Program at (800) 638-6620.





Incidental to
The site

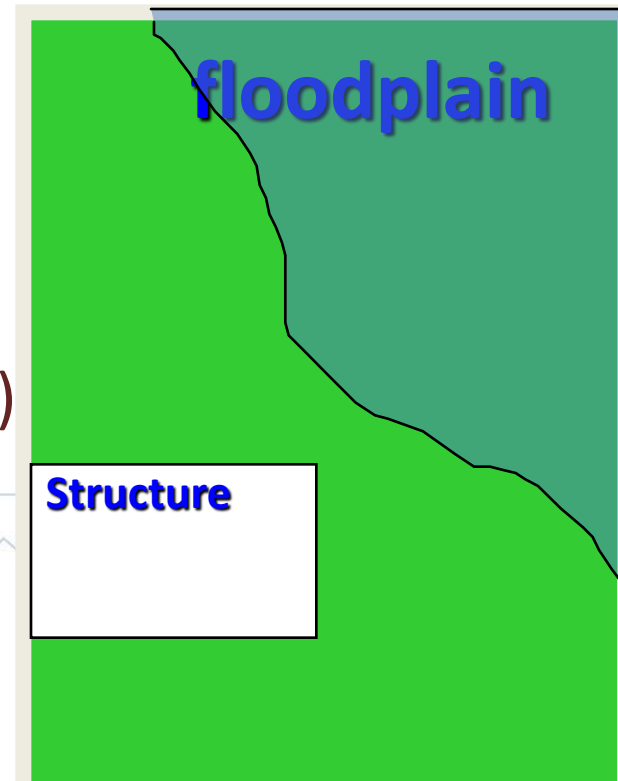
The 8-Step Process: Step 1

Is the site in the 100 yr Floodplain* (marked as an A, V, or E Zone on the FIRM)?

IF no, for building or construction

- Photo Copy FIRM Map and panel
- Mark the site
- Use to document the ER
- Create covenant or restriction & drainage plan (24 CFR Part 55.12(c)(6))
- Proceed with project

*Or 500-year floodplain for critical actions



The 8-Step Process: Step 1

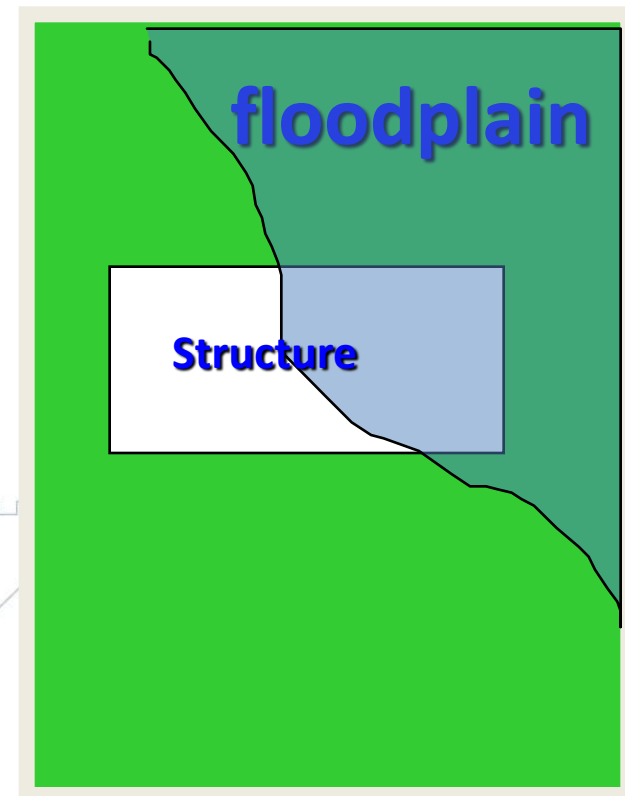
Is the site in the 100-yr Floodplain*?

site? building? both?

IF yes to building or both:

Continue to Step Two

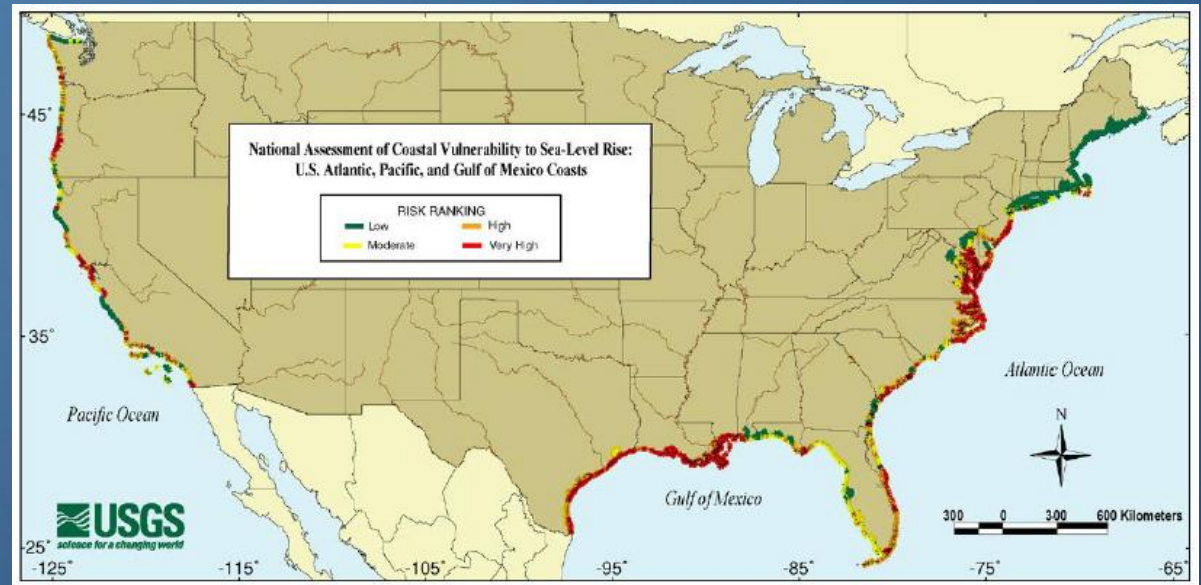
*Or 500-year floodplain for critical actions



Sea-Level Rise and increases in extreme events (floods and droughts) are occurring and current maps do not consider trends or anticipated conditions:



Washaway Beach, Cape Shoalwater, WA has been eroding an average of 100 feet per year for a century.



In this Aug. 24, 2010, photo is a view looking east about a block from the tiny town of Minnewaukan, ND's only school. Devils Lake, which was once 8 miles away, today is lapping at the community from three sides. (AP)

Step 2 Early Public Notice

Allow 15-day comment period

Notice shall state:

- The name of the project
- Proposed location
- Describe the activity
- Amount of property in the FP
- Location of the environmental record
- Name the Official to send comment to

• Example at:

[http://www.hud.gov/offices/cpd/environment/
review/sample_notices_flood.doc](http://www.hud.gov/offices/cpd/environment/review/sample_notices_flood.doc)



Step 3 Evaluate Alternatives

What are the alternatives?

- Alternative sites?
 - natural conditions
 - social demands/needs
 - economic cost
 - legal limitation
- Alternative methods to achieve project goals
- A “no project” alternative



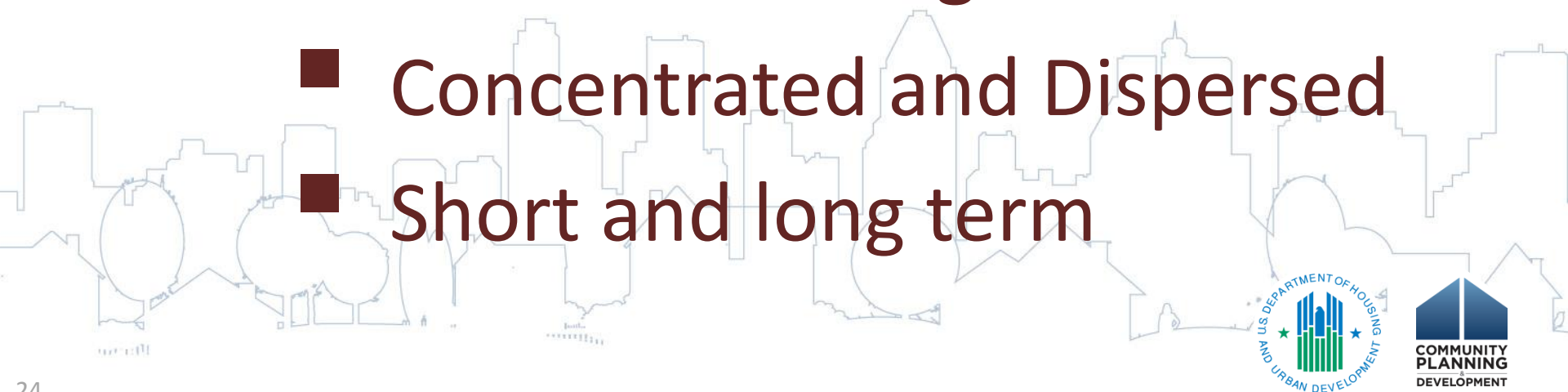
Step 4 Identify Impacts

Impact to the floodplain

Impact to people and property

Types of impacts:

- Positive and Negative
- Concentrated and Dispersed
- Short and long term



Step 5 Minimize Restore and Preserve

Minimize harm to lives and property

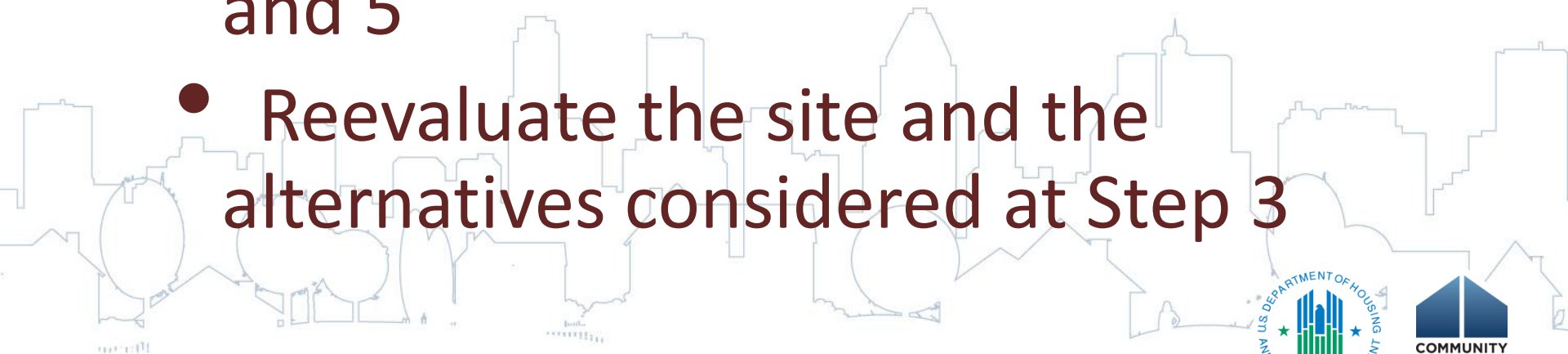
- limit fill of floodplain
- minimize grading
- relocate non-conforming structures
- preserve natural drainage
- use pervious surfaces / green alleys
- maintain buffers
- use detention ponds or rain gardens
- use development restrictions such as easements and covenants (see NRCS)
- minimize tree cutting and destruction of wetland vegetation



Step 6 Reevaluate the Project

Is project still feasible considering?

- Exposure to floods
- Potential to increase hazards
- New information gathered in step 4 and 5
- Reevaluate the site and the alternatives considered at Step 3



Step 7 Publish the Final Notice

If it is determined there is no alternative:

- Publish Final Notice
 - justify location in Floodplain
 - list alternatives considered
 - list all mitigation measures
 - WAIT seven days for comment
 - Example at:
http://www.hud.gov/offices/cpd/environment/review/sample_notices_flood.doc



Step 8 Implement the Project

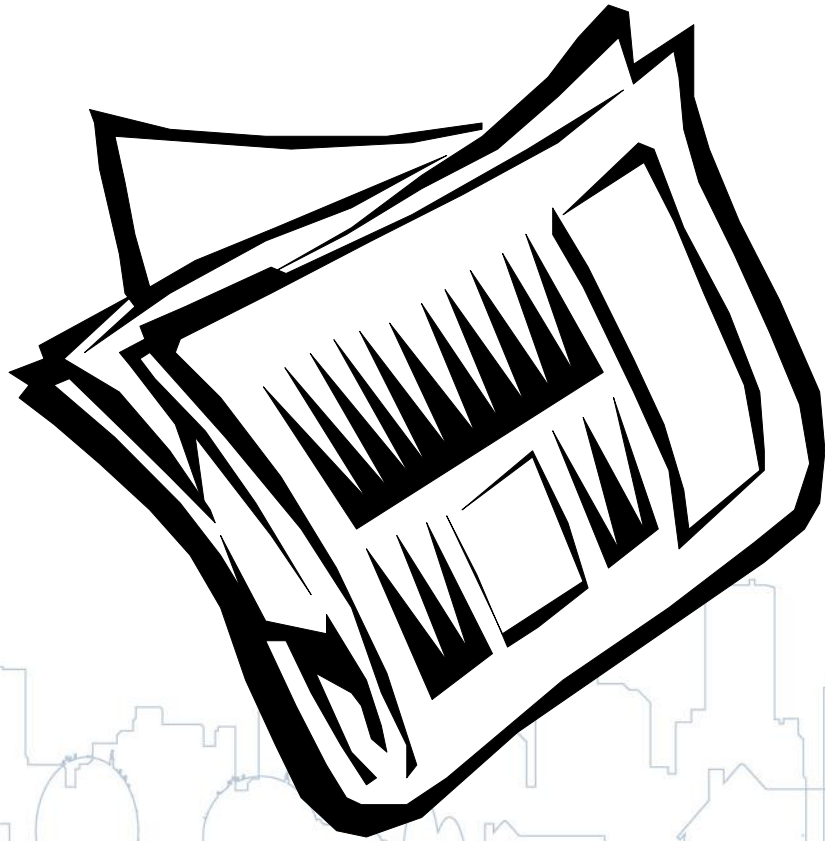


Program Staff Must:

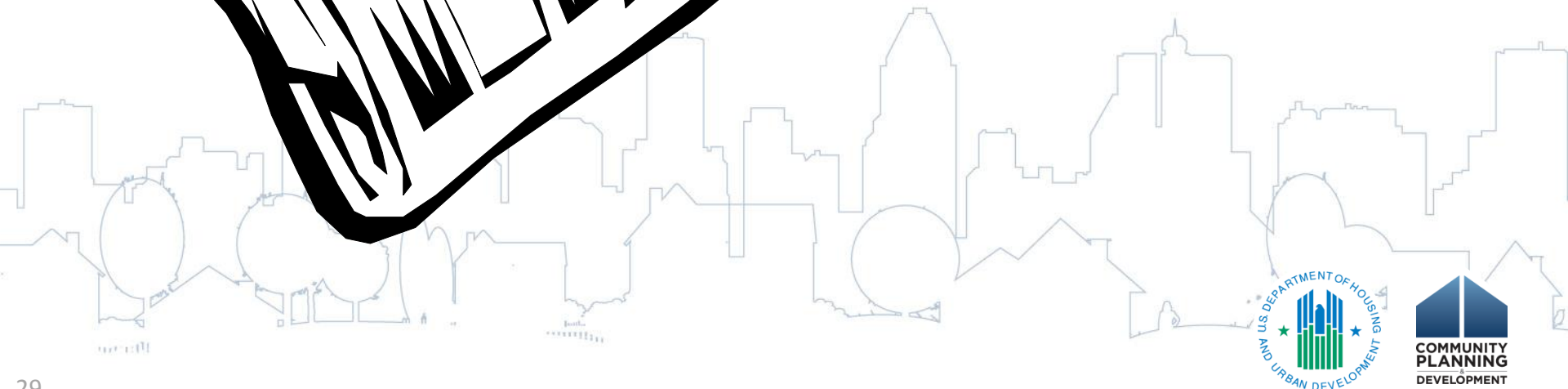
- continue to monitor and
- ensure mitigation measures are implemented



Eight Step Process: Timing



Process must
be completed
prior to FONSI



BUY FLOOD INSURANCE!!!

(*this is in red caps for shouting effect/emphasis*)

The Flood Disaster Protection Act of 1973, as amended, requires that property owners purchase flood insurance for buildings located within Special Flood Hazard Areas (SFHA), when Federal financial assistance is used to acquire, repair, improve, or construct a building.

Note that this is required by a statute and not the E.O. 11988. This requirement will apply in many cases where the 8 Step process may not be applicable.



Flood Insurance

Duration of Flood Insurance Coverage. The statutory period for flood insurance coverage may extend beyond project completion. For loans, loan insurance or loan guarantees, flood insurance coverage must be continued for the term of the loan. **For grants and other non-loan forms of financial assistance, flood insurance coverage must be continued for the life of the building irrespective of the transfer of ownership.**

One Bite Rule. HUD cannot offer Federal disaster assistance for a person's property for construction activities , where the person previously received Federal disaster assistance and failed to maintain the flood insurance. See 24 CFR 58.6.

HUD recommends purchase for all insurable structures.



Monitoring Flood Insurance

U.S. DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY

National Flood Insurance Program

PART 1 (OF 2) OF FLOOD INSURANCE APPLICATION

IMPORTANT—PLEASE PRINT OR TYPE

O.M.B. No. 1660-0006 Expires August 31, 2013

CURRENT POLICY NUMBER	
<input type="checkbox"/> NEW	
<input type="checkbox"/> RENEWAL	

POLICY TERM	DIRECT BILL INSTRUCTIONS:		POLICY PERIOD IS FROM _____ TO _____	
	<input type="checkbox"/> BILL INSURED <input type="checkbox"/> BILL SECOND MORTGAGEE <input type="checkbox"/> BILL OTHER		WAITING PERIOD: <input type="checkbox"/> STANDARD 30-DAY <input type="checkbox"/> MAP REV. (ZONE CHANGE FROM NON-SFHA TO SFHA)—ONE DAY <input type="checkbox"/> LOAN—NO WAITING <input type="checkbox"/> LENDER REQUIRED—NO WAITING	
AGENT INFORMATION	NAME, ADDRESS OF LICENSED PROPERTY OR CASUALTY INSURANCE AGENT OR BROKER:		NAME, MAILING ADDRESS, AND TELEPHONE NO. OF INSURED:	
	AGENCY NO.: _____ AGENT'S TAX ID: _____ PHONE NO.: _____ FAX NO.: _____			
DISASTER ASSISTANCE	IS INSURANCE REQUIRED FOR DISASTER ASSISTANCE? <input type="checkbox"/> YES <input type="checkbox"/> NO		IS INSURED PROPERTY LOCATION SAME AS INSURED'S MAILING ADDRESS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
	IF YES, CHECK THE GOVERNMENT AGENCY: <input type="checkbox"/> SBA <input type="checkbox"/> FEMA <input type="checkbox"/> FHA <input type="checkbox"/> OTHER (SPECIFY): _____ ENTER CASE FILE NUMBER: _____		IF NO, ENTER PROPERTY ADDRESS. IF RURAL, DESCRIBE PROPERTY LOCATION (DO NOT USE P.O. BOX).	
MORTGAGEE	NAME AND ADDRESS OF FIRST MORTGAGEE:		IF SECOND MORTGAGEE, LOSS PAYEE OR OTHER IS TO BE BILLED, COMPLETE THE FOLLOWING, INCLUDING THE NAME, AND ADDRESS:	
	LOAN NO.: _____ PHONE NO.: _____ FAX NO.: _____		<input type="checkbox"/> 2ND MORTGAGEE <input type="checkbox"/> DISASTER AGENCY <input type="checkbox"/> LOSS PAYEE <input type="checkbox"/> IF OTHER, PLEASE SPECIFY: _____	
COMMUNITY	RATING MAP INFORMATION		GRANDFATHERED? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, <input type="checkbox"/> BUILT IN COMPLIANCE?	
	NAME OF COUNTY/PARISH: _____ COMMUNITY NO./PANEL NO. AND SUFFIX: _____ FIRM ZONE: _____ COMMUNITY PROGRAM TYPE IS: <input type="checkbox"/> REGULAR <input type="checkbox"/> EMERGENCY		<input type="checkbox"/> CONTINUOUS COVERAGE? PRIOR POLICY NO.: _____ CURRENT COMMUNITY NO./PANEL NO. AND SUFFIX: _____ CURRENT FIRM ZONE: _____ CURRENT BFE: _____	
BUILDING	IS INSURED BUILDING OWNED BY STATE GOVERNMENT? <input type="checkbox"/> YES <input type="checkbox"/> NO		IS BUILDING LOCATED ON FEDERAL LAND? <input type="checkbox"/> YES <input type="checkbox"/> NO	
	BUILDING OCCUPANCY <input type="checkbox"/> SINGLE FAMILY <input type="checkbox"/> 2-4 FAMILY <input type="checkbox"/> OTHER RESIDENTIAL <input type="checkbox"/> NON-RESIDENTIAL (INCLUDING HOTEL/MOTEL)	NUMBER OF FLOORS IN ENTIRE BUILDING (INCLUDE BASEMENT/ENCLOSED AREA, IF ANY) OR BUILDING TYPE <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 OR MORE <input type="checkbox"/> SPLIT LEVEL <input type="checkbox"/> TOWNHOUSE/ROWHOUSE (RCBP LOW-RISE ONLY) <input type="checkbox"/> MANUFACTURED (MOBILE) HOME/TRAVEL TRAILER ON	CONDO FORM OF OWNERSHIP? <input type="checkbox"/> YES <input type="checkbox"/> NO CONDO COVERAGE IS FOR: <input type="checkbox"/> UNIT <input type="checkbox"/> ENTIRE BUILDING RESIDENTIAL CONDOMINIUM BUILDING ASSOCIATION POLICY ONLY: TOTAL NUMBER OF UNITS (INCLUDE NON-RES.) <input type="checkbox"/> HIGH-RISE <input type="checkbox"/> LOW-RISE	IS THIS BUILDING IN THE COURSE OF CONSTRUCTION? <input type="checkbox"/> YES <input type="checkbox"/> NO IS BUILDING WALLED AND ROOFED? <input type="checkbox"/> YES <input type="checkbox"/> NO IS BUILDING OVER WATER? <input type="checkbox"/> NO <input type="checkbox"/> PARTIALLY <input type="checkbox"/> ENTIRELY IS BUILDING FLOATED?

Grantees can condition assistance upon receiving notification of flood insurance policy changes. Contact information should be placed in the 2nd Mortgagee or Other Box.



HUD and E.O. 11990

Wetlands Protection

Jerimiah Sanders
Office of Environment and Energy



E.O. 11990 - Protection of Wetlands

- Issued May 24, 1977 by President Carter.
- Purpose is “to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative[.]”



E.O. 11990 vs. 404 Clean Water Act

Similarities:

Similar *wetlands* definitions but differ in application:

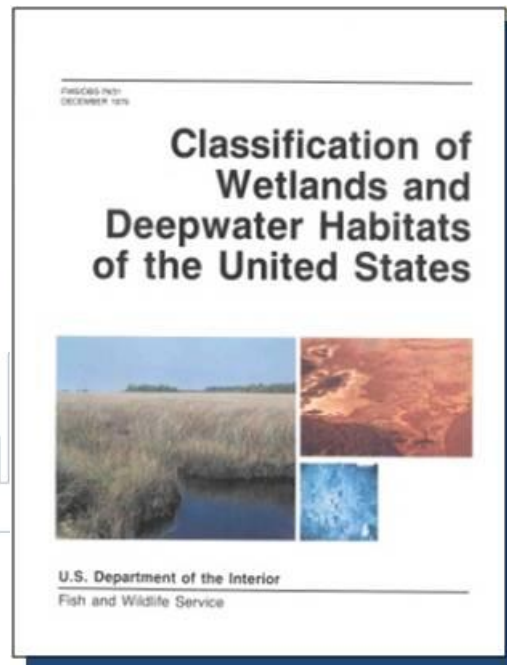
- E.O. 11990 Sec. 7 (c): “Those areas that are **inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.** Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.” EO is more explicit due to a greater number of examples.
- Section 404, 33 CFR 328.3(b): “The term ***wetlands*** means those areas that are **inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.** Wetlands generally include swamps, marshes, bogs, and similar areas.”



Sources for Wetlands Identification

Fish and Wildlife Services Classification Manual:

<http://www.fws.gov/wetlands/Documents/Classification-of-Wetlands-and-Deepwater-Habitats-of-the-United-States.pdf#search=>



E.O. 11990 vs. 404 Clean Water Act

404 jurisdiction can be somewhat ambiguous but basically limited to:

Traditional navigable waters

Tributaries of the above that are relatively permanent (flow year round or continuous flow seasonally, typically three months)

Adjacent waters

Water with a “significant nexus” to a traditional navigable water.

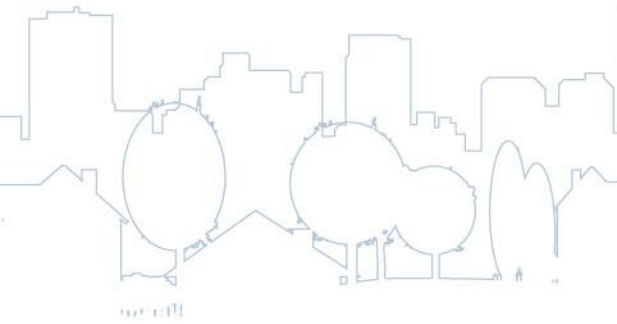
Excludes prior converted cropland

Note: ALL 404 Wetlands are EO 11990 Wetlands.



Wetlands Protection

Decision making process



Step 1: Designated Wetlands

- National Wetlands Inventory as primary and can use NRCS, State, and Local Wetlands Data
- Contact FWS or a wetlands professional if the presence is not shown on maps but is suspected or known.
 - <http://www.fws.gov/wetlands/NWI/Staff.html>
 - [Wetlands Definition for EO 11990: Classification of Wetlands and Deepwater Habitats of the United States, U. S. Fish and Wildlife Service, Cowardin.](#)

*A site visit or delineation by a wetland professional may also be used to confirm the map's accuracy but it is not required.

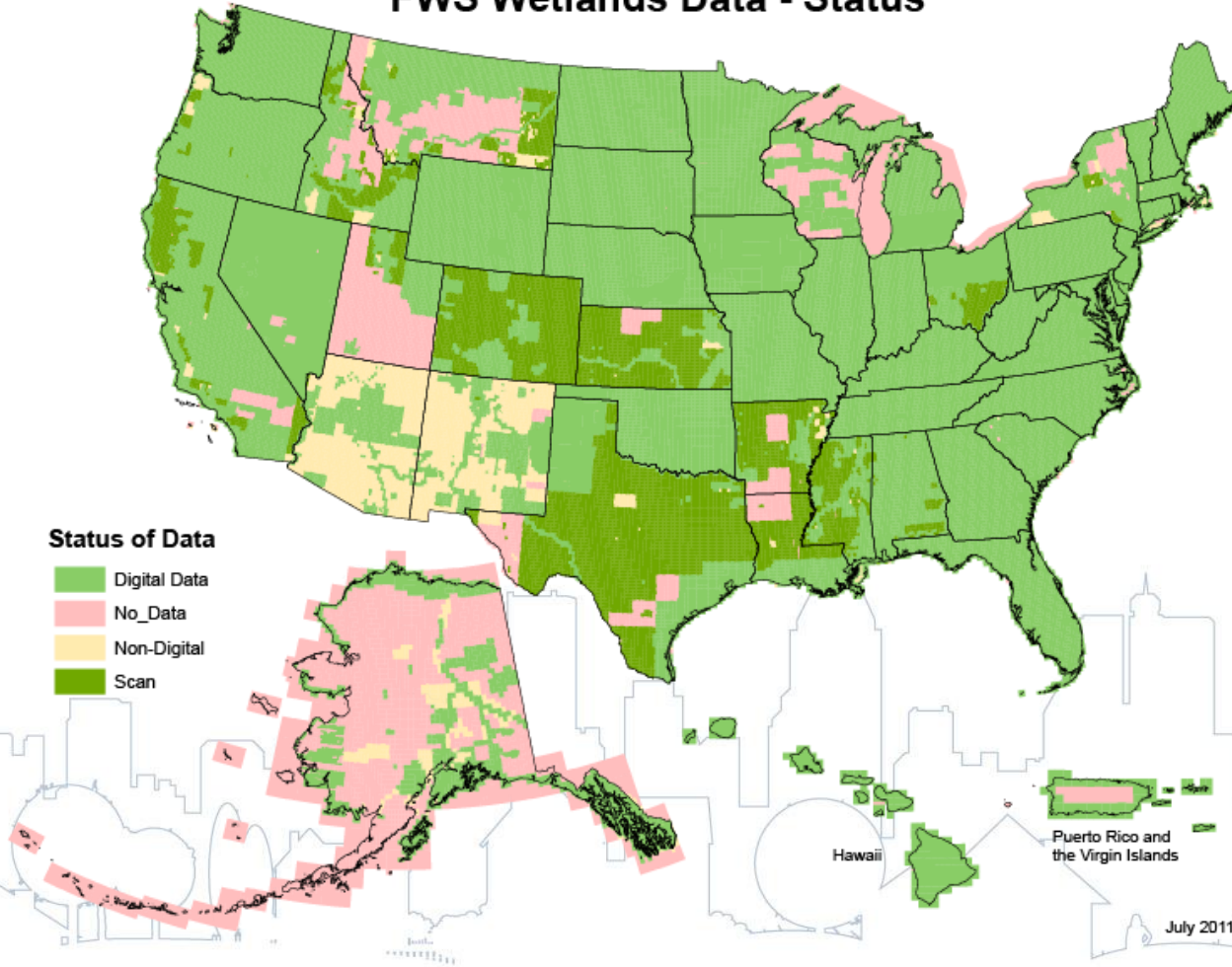


Step 1: Designated Wetlands

FWS Wetlands Data - Status

Status of Data

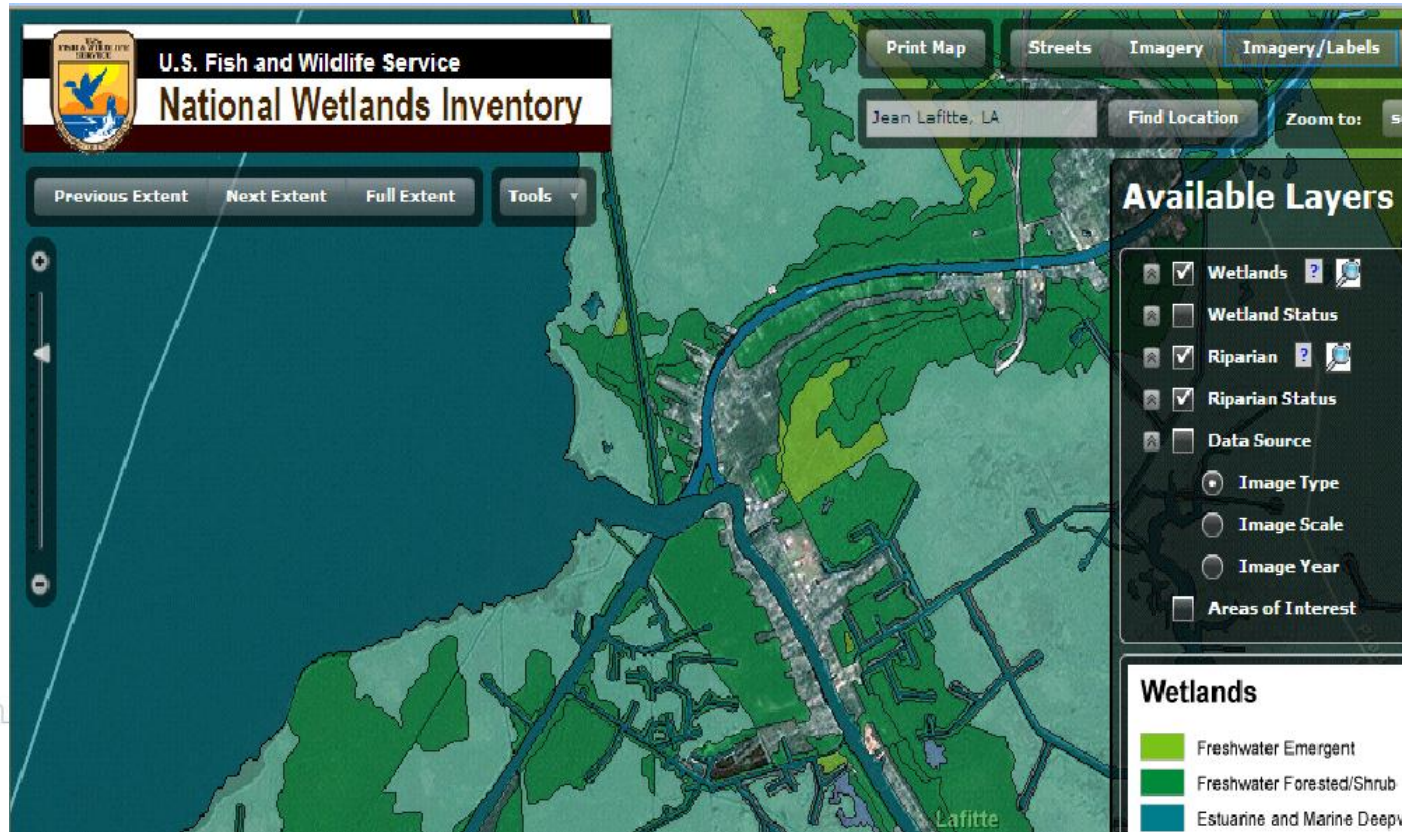
- Digital Data
- No_Data
- Non-Digital
- Scan



July 2011



National Wetlands Inventory Map



Step 1: Floodplain Presence

For new construction in a wetland and floodplain, combine §55.20 decision making process with E.O. 11990 Sec. 7 for definitions for wetlands and construction (applicability); Sec. 5 for factors relevant to survival and quality of the wetland (impacts); and Sec. 2(a) economic, environmental, and other factors such as technology in making the wetland finding. First and second notice cite both Executive Orders (practicability).



Step 1: Primary NBFV of Floodplain

The wetland is the primary natural and beneficial function and value for new construction proposed in both a floodplain and a wetland.



Step 7 requires that all mitigation measures be undertaken to minimize adverse impacts and to restore and preserve the natural and beneficial functions and values.



Step 2: Public Notices

Involve public in decision making

15 calendar day minimum comment period

Notice content: project description, location, wetland acreage,

contact, office address and hours.

May combine wetland notice with flood plain notice or Draft EIS, if wetland notice is identified in title.

Published in local printed news

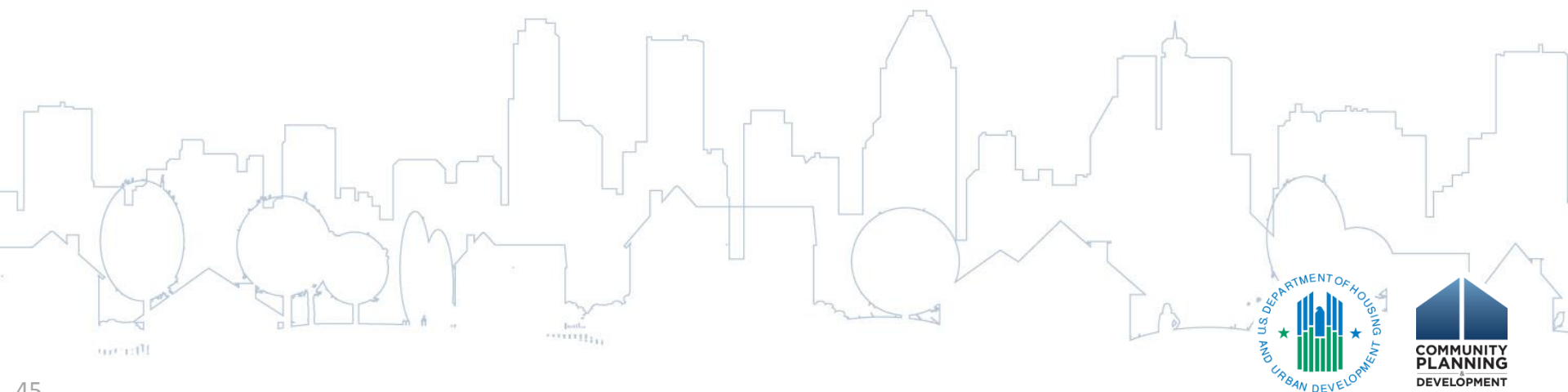
Mailed to federal, state, and local public agencies, organizations, and individuals known to be interested.



Step 3: Practicable Alternatives

Identify and evaluate alternatives to construction in wetlands:

- Construction locations outside the wetlands
- Alternative methods to serve the identical project objective
- Alternative not to approve any construction proposing to occupy or modify a wetland



Step 4: Evaluate impacts to wetlands

Identify and evaluate potential direct and indirect impacts of the proposed construction on the survival and quality of wetlands

Sec. 5 factors:

Public health, safety, and welfare (incl. Water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion).

Maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and flood and fiber resources; and

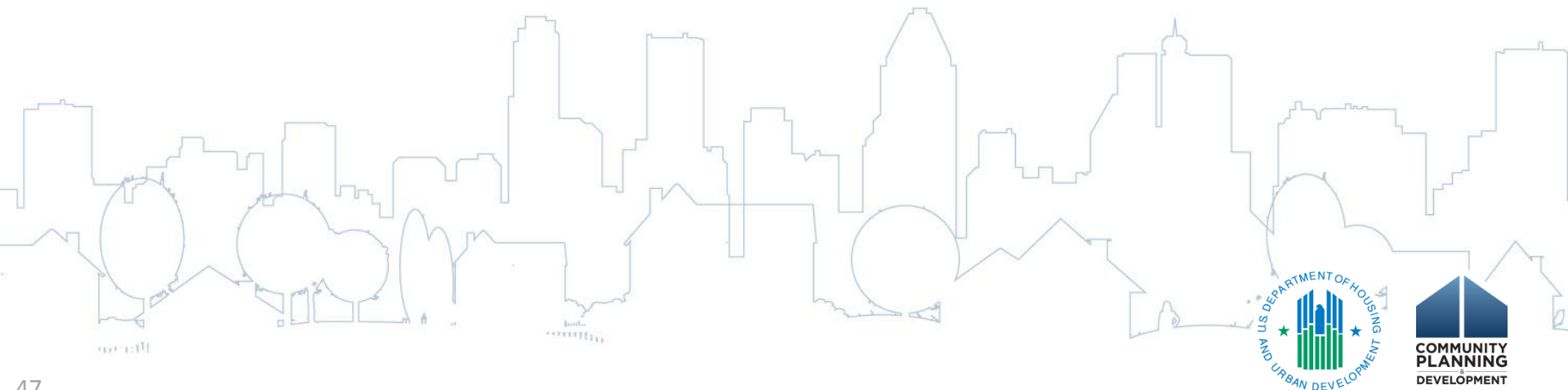
Other uses of wetlands in the public interest, incl. recreation, scientific and cultural uses.



Step 4: Evaluation

Sec. 2(a) requires decision makers take into account economic, environmental, and other pertinent factors in making a finding.

- (i) cost increases attributed directly to wetland-required construction and mitigation measures to minimize harm to the wetland;
- (ii) increased costs to affordability of housing.



Step 5: Minimization

Design or modify the proposed construction to minimize the potential adverse impacts to wetlands; and
Restore and preserve its natural and beneficial functions and values.
Reject the proposal if minimization is financially or physically unworkable.



Step 5: Minimization (cont'd)

Note: some minimization examples are manmade swales, permeable surfaces (e.g. green alleys), site planning around sensitive areas, covenants or easements for non-affected wetlands, and compensatory mitigation.



Step 6: Reevaluate

Whether still practicable, in light of the (1) possible adverse impact on the on-site wetland or (2) whether other neighboring wetlands will be impacted and (3) look at the potential to disrupt the natural and beneficial values of wetlands.

Whether alternatives preliminarily rejected in Step 3 are practicable in the light of information gained in Steps 4 and 5.



Step 7: No Practicable Alternative Finding

If reevaluation results in a finding of no practicable alternative, publish the final notice for 7 calendar days according to Step 2.

Final notice content include also:

- (i) reasons why the construction must be located in the wetland;
- (ii) list of alternatives considered under Step 3; and
- (iii) cite all mitigation measures to be taken to minimize adverse impact and to restore and preserve the natural and beneficial functions and values.



Step 8: Implementation

Complete the decision making process for protection of wetlands and the environmental review compliance.

Continuing responsibility exists on part of decision makers and builders to ensure that the mitigating measures identified in Step 7 are implemented.



Conclusion

Avoidance is the first priority.

- Tough to recreate
- Bad sites and poor investments: often prone to flooding, wave action, erosion, soil instability, liquefaction, sinkholes, subsidence, and special earthquake hazards



Who wants a role in this?



Resources

ATEC: <http://www.hud.gov/offices/cpd/environment/atec.cfm>

FEMA Map Service Center:

<http://www.msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>

DFIRM Database:

http://www.msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay?catalogId=10001&storeId=10001&categoryId=12001&langId=-1&userType=G&parent_category_rn=12009&dfirmCatId=12009&type=1

FWS:

<http://www.fws.gov/wetlands/>

